

From the
INTERNATIONAL PRELIMINARY EXAMINING

PCT

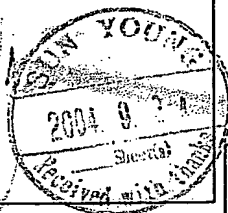
To:

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NOTIFICATION OF TRANSMITTAL OF
INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)



Date of mailing
(day/month/year) 21 SEPTEMBER 2004 (21.09.2004)

Applicant's or agent's file reference
FGPL03-002

IMPORTANT NOTIFICATION

International application No:

PCT/KR2003/001119

International filing date (day/month/year)

09 JUNE 2003 (09.06.2003)

Priority date (day/months/year)

08 JUNE 2002 (08.06.2002)

Applicant

LG INNOTEK CO.,LTD et al

1. The applicant is hereby notified that International Preliminary Examining Authority transmits here with the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**
The applicant must enter the national phase before each elected office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details in the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/KR



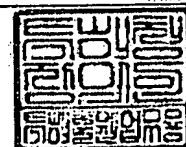
Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

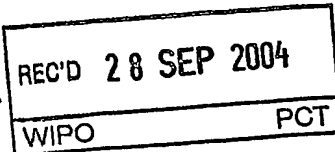
COMMISSIONER

Telephone No. 82-42-481-5281



COPY FOR IB
PATENT COOPERATION TREATY
PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)



Applicant's or agent's file reference FGPL03-002	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/KR2003/001119	International filing date (day/month/year) 09 JUNE 2003 (09.06.2003)	Priority date (day/month/year) 08 JUNE 2002 (08.06.2002)
International Patent Classification (IPC) or national classification and IPC IPC7 G01L 9/00		
Applicant LG INNOTEK CO., LTD et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 16 OCTOBER 2003 (16.10.2003)	Date of completion of this report 17 SEPTEMBER 2004 (17.09.2004)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer JEONG, Ho Geun Telephone No. 82-42-481-8143 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/001119

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement) under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☒ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheet _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR2003/001119

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-10	YES
	Claims		NO
Inventive step (IS)	Claims	1-10	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

The following documents from the International Search Report have been considered for the purpose of this written opinion:

D1: US 4216401 A
D2: US 4454440 A
D3: US 5051645 A
D4: WO 99/21001 A1

1. Subject Matter

The invention claimed in claims 1-10 relates to an SAW sensor device for sensing the pressure using a slit acoustic wave comprising: a piezoelectric medium having a thin film at its upper portion, a medium at its lower portion, and a slit to sense the outside pressure applied to the sensor; an input IDT formed at an outer portion of said slit, for transducing an electric input signal into the slit acoustic wave; and an output IDT formed at an outer portion opposite to said input IDT, for receiving the propagated slit acoustic wave and transducing the wave into an electric signal.

2. Prior Art

D1 discloses an improved SAW pressure sensor that comprises a dual substrate including a SAW substrate and a base substrate. The SAW substrate has parallel major surfaces spaced relative to each other at a first dimension equal to a desired diaphragm thickness, a first major surface including electro-acoustic transducers disposed in an active signal region thereon to provide one or more SAW delay lines, and the base substrate has an aperture extending therethrough from a mating surface to a base surface thereon.

(Continued on Supplemental Sheet.)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/001119

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of:

Box V.

D2 discloses a surface acoustic wave (SAW) pressure sensor that is mechanically supported within a vacuum sealing structure by a cylindrical metal sleeve which isolates the SAW sensor substrate from induced thermal strain resulting from the temperature cycling of the structure.

D3 relates to a surface-acoustic-wave (SAW) H₂O phase-change sensor capable of distinguishing air, water, dew, frost and ice.

D4 relates to a surface acoustic wave sensor.

3. Novelty and Inventive Step

The claimed invention is characterized in that a slit is provided at a piezoelectric medium for sensing the pressure applied from the outside of a sensor, and that the IDT detects the change in the nature of the acoustic wave within the slit according to the external pressure. None of the cited documents D1-D4 teach or fairly suggest the technology for measuring the change in the nature of the acoustic wave within a slit according to the external pressure and detecting the external pressure by a slit provided at a piezoelectric medium.

Therefore, the subject matter of claims 1-10 is considered to meet the requirements of PCT Article 33(2) and 33(3).

4. Industrial Applicability

The subject matter of claims 1-10 is considered to meet the requirement of PCT Article 33(4).